

Notice of Allowability

Application No.

09/871,779

Examiner

Michael N. Opsasnick

Applicant(s)

LI ET AL

Art Unit

2655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment received on 9/8/05.
2. ☒ The allowed claim(s) is/are 17-24, 38-46.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

W. R. YOUNG
PRIMARY EXAMINER

DETAILED ACTION

Allowable Subject Matter

1. Claims 17-24 and 38-46 are allowed over the prior art of record.
2. The following is an examiner's statement of reasons for allowance:

As per the independent claims, the recited claim language pertaining to the substitution of a supplemental average background noise parameters derived according to a supplemental algorithm for a running average of background noise parameters derived according to G.729 Annex B is not explicitly taught by the prior art of record. Furthermore, it would not have been obvious to one of ordinary skill in the art of voice classification to modify the teachings of the prior art of record to obtain the recited limitations of the independent claims as noted above.

As per the prior art of record, Benyassine et al. (IEEE 0163-6804/97) discloses the method of converging an ITU Recommendation G.729 Annex B voice activity detection (VAD) device, comprising the steps of: determining a noise identification threshold value; comparing a number of energy measures of a signal to said noise threshold value (Page 67, Paragraphs 8 - 11), determining a first value representing an average of said number of energy measures, when said energy measure is less than said noise threshold, wherein only the energy measures of said number of energy measures having values less than said noise threshold value are used to determine said first value (Page 68, Paragraph 2), determining a second value representing an average of said number of energy measures (Page 68, Paragraphs 2 - 3). However, Benyassine only offers a summary of the ITU G.729 Annex B standards, including a DTX algorithm, but

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does not teach the substitution of a supplemental average background noise parameters. Li et al. teaches updating a noise threshold, but does not teach the claim elements pertaining to the substitution of a supplemental average background noise parameters.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

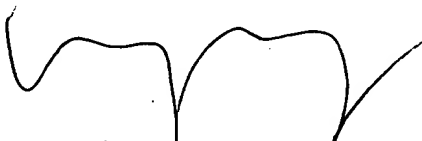
Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Opsasnick, telephone number (571)272-7623, who is available Tuesday-Thursday, 9am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Wayne Young, can be reached at (571)272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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W. R. YOUNG
PRIMARY EXAMINER

ABSTRACT

A method of initializing an ITU Recommendation G.729 Annex B voice activity detection (VAD) device is disclosed, having the steps of (1) extracting a set of parameters from a signal that characterize the signal; (2) calculating an energy measure of the signal from the set of parameters; (3) comparing the energy measure with a reference value; (4) determining an initial value for an average of a noise characteristic of the signal; and (5) counting the number of times the energy measure equals or exceeds the reference level. *mm*

Also disclosed is a method of converging an ITU Recommendation G.729 Annex B voice activity detection (VAD) device, having the steps of: (1) determining a noise identification threshold value; (2) comparing a number of energy measures of a signal to the noise threshold value; (3) determining a first value representing an average of the number of energy measures, when the energy measure is less than the noise threshold, wherein only the energy measures of the number of energy measures having values less than the noise threshold value are used to determine the first value; (4) determining a second value representing an average of the number of energy measures; and (5) substituting the first value for the second value when a specific event occurs, indicating the divergence of the two values.